

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) An apparatus for applying electrical pulses to a patient's body by at least two electrodes at respective locations on the patient's body, the apparatus comprising a pulse generating unit connectable to the electrodes, the pulse generating unit being arranged to provide a series of electrical pulses, wherein said series of pulses comprises a plurality of first and second polarity impulses having a temporal spacing between the first and second impulses, wherein each impulse has a width of ~~between 2 to 30 μ S~~ 15 to 20 μ S, wherein said pulses have a peak amplitude lying within the range 50 to 450 volts, plus or minus respectively, and the voltage decays from the respective positive or negative peak voltage to zero volts.

2. (Previously Presented) An apparatus as claimed in claim 1, wherein the first polarity is positive or negative and the second polarity is of the opposite polarity to the first polarity.

3-45 (Canceled)

46. (Previously Presented) An apparatus as claimed in claim 1, wherein said series of pulses has a spacing of at least 4 μ S between impulses or wherein said series of pulses has a spacing of at least 6 μ S between impulses or wherein said series of pulses has a spacing of at least 10 μ S between impulses.

47. (Previously Presented) An apparatus as claimed in claim 1, wherein said series of pulses has a spacing of at least $20\mu\text{S}$ between impulses.

48. (Previously Presented) An apparatus as claimed in claim 1, having a maximum spacing of $10\mu\text{S}$ between impulses or a maximum spacing of $20\mu\text{S}$ between impulses.

49. (Previously Presented) An apparatus as claimed in claim 1, wherein a temporal space exists between a plurality of contiguous impulses.

50. (Previously Presented) An apparatus as claimed in claim 1, wherein a temporal space exists between a majority of impulses.

51. (Previously Presented) An apparatus as claimed in claim 1, wherein a temporal space exists between all impulses.

52. (Previously Presented) An apparatus as claimed in claim 1, wherein each impulse has an asymmetric shape.

53. (Previously Presented) An apparatus as claimed in claim 52, wherein the transition time from 0 Volts to a peak magnitude is less than or equal to 30% of the impulse width or the transition time from 0 Volts to the peak magnitude is less than or equal to 10% of the impulse width or wherein the transition time from 0 to the peak magnitude is less than or equal to 5% of the impulse width or wherein the transition time from 0 to the peak magnitude is less than or equal to 1% of the impulse width.

54. (Previously Presented) An apparatus as claimed in claim 1, wherein the transition time between the positive voltage peak and the negative voltage peak is at least 70% of the pulse period.

55. (Previously Presented) An apparatus as claimed in claim 1, wherein said impulses have a peak amplitude lying within the range 50 to 450 Volts, plus or minus respectively.

56. (Previously Presented) An apparatus as claimed in claim 55, wherein each impulse has an amplitude within the range 150 to 250 Volts, plus or minus respectively.

57. (Previously Presented) An apparatus as claimed in claim 1, wherein the magnitude of positive peak amplitude is substantially equal to the magnitude of the negative peak amplitude.

58. (Previously Presented) An apparatus as claimed in claim 1, wherein during the spacing between impulses the output of the pulse generating unit remains at a level substantially equal to zero Volts.

59. (Previously Presented) An apparatus as claimed in claim 1, wherein the series of impulses are delivered at a predetermined frequency lying within the range 100Hz to 250kHz or wherein the series of impulses are delivered at a predetermined frequency lying within the range 1kHz to 250kHz or wherein the predetermined frequency lies

within the range 1kHz to 5kHz or the predetermined frequency lies in the range 2kHz to 3kHz.

60. (Previously Presented) An apparatus as claimed in claim 1, in which said series of pulses comprise a third impulse spaced from the second impulse by a temporal spacing.

61. (Previously Presented) An apparatus as claimed in claim 1, wherein the series of impulses is an intermittent series of pulses.

62. (Previously Presented) An apparatus as claimed in claim 61, wherein, in said intermittent series of electrical impulses, the ratio of the time period for which no impulses are being provided to the time period for which impulses are being regularly provided is within the range 1:3 to 1:20 and preferably 1:10.

63. (Previously Presented) An apparatus as claimed in claim 61, wherein at least one pause occurs in said intermittent series of impulses at least once every second or wherein said pause is of duration of at least 0.5 millisecond.

64. (Previously Presented) An apparatus as claimed in claim 1, further comprising at least two electrodes arranged for connection to said generating unit, for supplying electrical pulses to respective locations on the patients body.

65. (Previously Presented) An apparatus according to claim 1 for providing therapy to a patient.

66. (Previously Presented) An apparatus as claimed in claim 1, wherein said apparatus is for supplying electrical pulses to two or more locations on the patients body overlying the central nervous system, such that the pulses induce analgesic effects in the central nervous system, whilst stimulating peripheral nerves that lie between the electrodes and the central nervous system to a lesser extent or not at all.

67. (Previously Presented) An apparatus as claimed in claim 1, wherein said apparatus is for providing iontophoresis to a patients body by at least two iontophoresis electrodes at respective locations on the patient's body, the apparatus comprising a pulse generating unit connectable to the electrodes, the pulse generating unit being arranged to provide a series of electrical pulses having a peak amplitude of at least 50 Volts.

68. (Previously Presented) An apparatus as claimed in claim 67, further comprising at least two iontophoresis electrodes arranged for connection to said generating unit, for supplying electrical pulses to respective locations on the patient's body, at least one of said electrodes incorporating a medication in ionic form for application to the patient's body.

69-70. (Canceled)